

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Todd et. al.
Serial No: 10/762,044
Filed: January 21, 2004
For: METHODS AND APPARATUS FOR MODIFYING A RETENTION
PERIOD FOR DATA IN A STORAGE SYSTEM
Confirmation No.: 4481

Examiner: Etienne Leroux
Art Unit: 2161

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

A Notification of Non-Compliant Appeal Brief was mailed in connection with this application on June 26, 2007 and alleged that the brief failed to comply with the requirements of 37 C.F.R. 41.37(c)(1)(v) relating to providing a concise explanation of the subject matter defined in each of the independent claims on Appeal. This is the sole basis on which the Appeal Brief was alleged to be defective. MPEP §1205.03 indicates that when the sole alleged defect is due to the failure to provide a summary of the claimed subject matter as required by 37 CFR 41.37(c)(1)(v), an entire new brief need not and should not be filed, but rather a paper providing a summary as required will suffice.

Therefore, the following replacement "Summary of Claimed Subject Matter" is being submitted in response to the Notification of Non-Compliant Appeal Brief, and provides a summary as required by 37 CFR 41.37(c)(1)(v).

SUMMARY OF CLAIMED SUBJECT MATTER

Appellants appreciated that it is often important for a business or institution to prevent records from being deleted or modified until a certain period of time has elapsed (specification, page 1, lines 15-17). Thus, one embodiment of the invention is directed to the use of a retention period that may be assigned to a unit of data stored on a storage system, and that specifies a period of time during which the storage system will not permit deletion of the unit of data (specification, page 15, lines 1-12). Thus, if a request to delete the unit of data is received before expiration of the retention period, the request is denied and the unit of data is not deleted.

Appellants also appreciated that in some situations, it may be desired to reduce the length of a previously defined retention period before that retention period expires (specification, page 20, lines 26-29). Such situations may arise, for example, when an event occurs that may obviate the need to retain the data for the entire length of a previously defined retention period. For example, the death of a medical patient may obviate the need to retain the patient's medical records (specification, page 20, line 29 - page 21, line 1).

Each of the independent claims on appeal relates to reducing a previously-defined retention period for a unit of data stored on a storage system, where the retention period defines a period during which the unit of data cannot be deleted. One group of the independent claims (i.e., claims 1, 20, and 39) relates to actions taken by the storage system in reducing the retention period of a unit of data stored thereon (e.g., receiving a request from a host to reduce the retention period for a unit of data and reducing the retention period in response to the request), and another (i.e., claims 58, 65, and 72) relates to actions taken by a host computer in reducing the retention period of a unit of data stored on a storage system (e.g., sending a request to the storage system to reduce the retention period and receiving a response indicating that the request was granted).

Figure 5 of the application (reproduced below) conceptually shows one embodiment of the invention in which the retention period for a unit of data may be reduced. In Figure 5, host 501 sends a request 503 to a storage system 505. The request 503 seeks to reduce a retention period for a unit of data 506 (the particular type of unit of data is referred to as a CDF) stored in the storage system 505 (specification, page 21, lines 11-14). The retention period is reduced in response, which permits the unit of data to be deleted prior to expiration of the longer retention period initially specified (specification, page 22, lines 13-19).

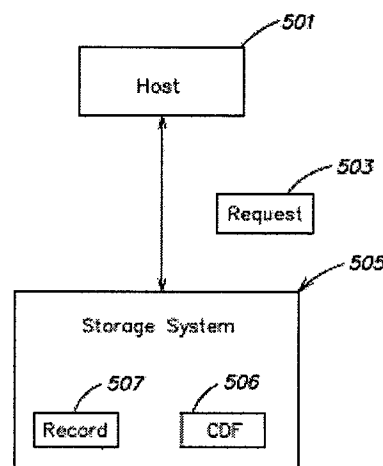


FIG. 5

A summary of each independent claim, with citation to the specification, is provided below. The portions of the specification cited below are only examples of places in the specification that provide support for these claims, as other portions of the specification may provide additional support. Moreover, the cited portions of the specification are only examples of some embodiments of the invention, and the claims are not limited to these or any other specific example or embodiment.

In addition, the above discussion of embodiments of the invention is provided merely to assist the Board in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Board is requested to not rely upon the foregoing summary in

interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record.

Independent Claim 1

Claim 1 is directed to a method of processing data in a computer system comprising a host and at least one content addressable storage (CAS) system (specification, page 12, line 1 – page 13, line 5; Figure 1) wherein the host identifies units of data on the CAS system(s) using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data (specification, page 13, lines 18-27). The CAS system(s) store at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted (specification, page 15, lines 1-12). The method comprises acts of: (A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5); and (B) reducing the length of the retention period in response to the request (specification, page 22, lines 13-19).

Independent Claim 20

Claim 20 is directed to at least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data (specification, page 39, lines 10-14) wherein the computer system comprises a host and at least one content addressable storage (CAS) system (specification, page 12, line 1 – page 13, line 5; Figure 1), wherein the at least one host identifies units of data on the CAS system(s) using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data (specification, page 13, lines 18-27), the CAS system(s) store at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted (specification, page 15, lines 1-12). The method comprises acts of: (A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5); and (B) reducing the length of the retention period in response to the request (specification, page 22, lines 13-19).

Independent Claim 39

Claim 39 is directed to a storage system for use in a computer system including the storage system and at least one host, wherein the storage system is a content addressable storage (CAS) system (specification, page 12, line 1 – page 13, line 5; Figure 1), and wherein the at least one host identifies units of data on the at least one CAS system using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data (specification, page 13, lines 18-27). The storage system comprises: at least one storage device to store at least one unit of data that is received from the at least one host and has an associated retention period during which it cannot be deleted (specification, page 15, lines 1-12); and at least one controller that is adapted to: receive a request to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5); and reduce the length of the retention period in response to the request (specification, page 22, lines 13-19).

Independent Claim 58

Claim 58 is directed to a method of processing data in a computer system comprising a host and at least one content addressable storage (CAS) system (specification, page 12, line 1 – page 13, line 5; Figure 1), wherein the host identifies units of data on the CAS system(s) using content addresses generated based, at least in part, on at least a portion of the content of the unit of data (specification, page 13, lines 18-27). The CAS system(s) store at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted (specification, page 15, lines 1-12). The method comprises acts of: (A) sending, from the at least one host, a request to the CAS system(s) to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5); and (B) receiving, from the CAS system(s), a response indicating that the request was granted (specification, page 22, lines 13-19).

Independent Claim 65

Claim 65 is directed to at least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data (specification,

page 39, lines 10-14), wherein the computer system comprises a host and at least one content addressable storage (CAS) system (specification, page 12, line 1 – page 13, line 5; Figure 1), wherein the host identifies units of data on the CAS system(s) using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data (specification, page 13, lines 18-27). The CAS system(s) store at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted (specification, page 15, lines 1-12). The method comprises acts of: (A) sending, from the at least one host, a request to the CAS system(s) to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5); and (B) receiving a response indicating that the request was granted (specification, page 22, lines 13-19).

Independent Claim 72

Claim 72 is directed to a host computer for use in a computer system that includes the host computer and at least one CAS system (specification, page 12, line 1 – page 13, line 5; Figure 1), wherein the host identifies units of data on the CAS system(s) using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data (specification, page 13, lines 18-27). The CAS system(s) store, for the host, at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted (specification, page 15, lines 1-12). The host computer comprises: at least one storage device; and at least one controller, coupled to the at least one storage device, that is adapted to send a request to the CAS system(s) to reduce a length of the retention period for the at least one unit of data (specification, page 21, lines 11-14; Figure 5) and receive, from the CAS system(s), a response indicating that the request was granted (specification, page 22, lines 13-19).

Respectfully submitted,

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